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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,928	02/27/2004	Tobin J. Marks	7479	6801

22922 7590 04/19/2006

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EXAMINER

KUGEL, TIMOTHY J

ART UNIT PAPER NUMBER

1712

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	Application No. 10/789,928	Applicant(s) MARKS ET AL.	
	Examiner Timothy J. Kugel	Art Unit 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 19-22 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10 and 11 is/are allowed.
- 6) ☒ Claim(s) 1-4, 7, 12, 15, 16 and 18 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 8, 9, 13, 14 and 17 is/are objected to.
- 8) ☒ Claim(s) 1-22 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2004 and 03 April 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. Claims 1-22 pending as filed on 27 February 2005. Claims 19-22 are withdrawn from consideration.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Oath/Declaration***

3. Applicant's argument, filed 3 April 2006, with respect to the fact that the inventor's mailing address was altered prior to execution of the oath or declaration has been fully considered and are persuasive.

The objection to the oath or declaration has been withdrawn.

### ***Drawings***

4. The drawings were received on 3 April 2006. These drawings are accepted.
5. New drawings in compliance with 37 CFR 1.121(d) are required in this application because the figure labeled Scheme 1 and Scheme 2 should be presented as a separate figure and not be imbedded in the disclosure. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

***Specification***

6. Applicant's amendment, filed 3 April 2006, with respect to the submission of a substitute specification has been fully considered and are corrective. The objection to the specification has been withdrawn.

7. The incorporation of essential material in the specification by reference to an unpublished U.S. application, foreign application or patent, or to a publication is improper. Applicant is required to amend the disclosure to include the material incorporated by reference, if the material is relied upon to overcome any objection, rejection, or other requirement imposed by the Office. The amendment must be accompanied by a statement executed by the applicant, or a practitioner representing the applicant, stating that the material being inserted is the material previously incorporated by reference and that the amendment contains no new matter. 37 CFR 1.57(f).

***Claim Rejections - 35 USC § 112***

8. The rejection of claim 18 under 35 USC 112 1<sup>st</sup> paragraph as not being enabled is maintained. Applicant's arguments filed 3 April 2006 have been fully considered but they are not persuasive.

Applicant argues that the support for a substrate that comprises the condensation product of hydroxylated indium tin oxide and an aminoalkyltrialkoxysilane can be found in Scheme 2 on page 10 of the specification, however, while a substrate modified with 3-(trimethoxysilyl)propan-1-amine is shown, there is no mention of hydroxylated indium tin oxide or of any other aminoalkyltrialkoxysilane.

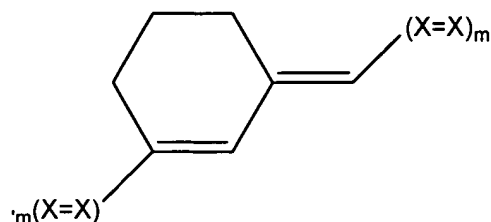
Art Unit: 1712

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 7 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Each of claims 7 and 15 recite, the limitation "wherein  $(-X=X-)_n$  comprises a moiety having a structural formula selected from  $(-C=C-)_n$  and



wherein  $m + m' \geq 1$ ." It is unclear what the  $(-X=X-)_m$  and  $(-X=X-)_{m'}$  represent.

### ***Double Patenting***

11. The rejection of claims 1-4 under the judicially created doctrine of obviousness type double patenting as being unpatentable over claim 14 of US Patent 6,855,274 (Marks hereinafter) is maintained. Applicant's arguments filed 3 April 2006 have been fully considered but they are not persuasive.

Applicant argues that Marks does not teach the present hydrogen-donor or hydrogen-acceptor moieties and that Marks' self-assembly procedure would lead one away from the present invention, however, the chromophore claimed by Marks reads on the instant claims 1-4.

***Claim Rejections - 35 USC § 102 and 35 USC § 103***

12. Applicant's arguments, filed 3 April 2006, particularly that Peiwang Zhu et al., Electro-Optic Thin Films Self-Assembled via Multiple Hydrogen Bonds from the Vapor Phase, *Polymeric Materials: Science & Engineering*, 2003, 89, 265-266 (Zhu hereinafter) was not published prior to the provisional application from which the instant application claims priority, have been fully considered and are persuasive.

The rejection of claims 1-17 under 35 USC 102(n) as being anticipated by Zhu has been withdrawn.

The rejection of claim 18 under 35 USC 102(a) as being unpatentable over Zhu in view of US Patent 4,410,563 (Richter hereinafter) has been withdrawn.

13. The rejections of claims 1, 2, 7, 12, 15 and 16 under 35 U.S.C. 102(b) as being anticipated by US Patent 3,947,410 (Meyer '410 hereinafter) and of claims 1, 2 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by United Kingdom Patent GB 1398993 (Fleck hereinafter) are maintained. Applicant's arguments filed 3 April 2006 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., that the hydrogen-donor and hydrogen-acceptor moieties of Meyer and Fleck are not capable of hydrogen bonding interactions) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

***Allowable Subject Matter***

14. Claims 10 and 11 are allowed.
15. Pertaining to the elected species, claims 1-6, 8-14, 16 and 17 are allowable.
16. Claims 5, 6, 8, 9, 13, 14 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
17. Claims 7 and 15 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

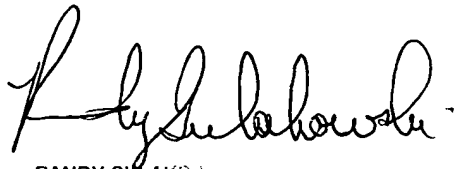
***Conclusion***

18. Regarding Swiss Patent 577 535 (Meyer '535 hereinafter) and German Patent 3620825 (Schellhammer hereinafter), X-type references on the International Search Report for PCT/US04/06249—which is a continuation of 60/450,907, from which the instant application is a continuation—both references are cumulative to the Meyer '410 and Fleck.
19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Kugel whose telephone number is (571) 272-1460. The examiner can normally be reached 6:00 AM – 4:30 PM Monday - Thursday.  
  
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1712

20. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TJK  
Art Unit 1712



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